

Manitoba Agricultural Review 1989



Manitoba
Agriculture
Economics



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Agriculture Canada	
Farm Credit Corporation	
Manitoba Agricultural Credit Corporation	
Manitoba Agriculture	
Manitoba Bureau of Statistics	
Manitoba Hydro	
Statistics Canada	
Western Canada Fertilizer Association	

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MANITOBA AGRICULTURAL REVIEW

INTRODUCTION

The major focus of this publication is on primary agriculture. However, farming obviously cannot exist in isolation. It is an integral part of the total agriculture-food system which also includes manufacturing, processing, transportation, distribution and wholesale/retail trade. Agriculture makes an important contribution to Manitoba's overall economic activity, both in its production and consumption. Between

1985 and 1989, agriculture and related industries contributed an average of 12.5 percent to the provincial Gross Domestic Product. In Manitoba, one job in seven depends on agricultural production. In addition to stimulating local employment, agriculture in Manitoba is directly responsible for about 26,000 jobs in other parts of Canada.

PRIMARY AGRICULTURE

LAND RESOURCE

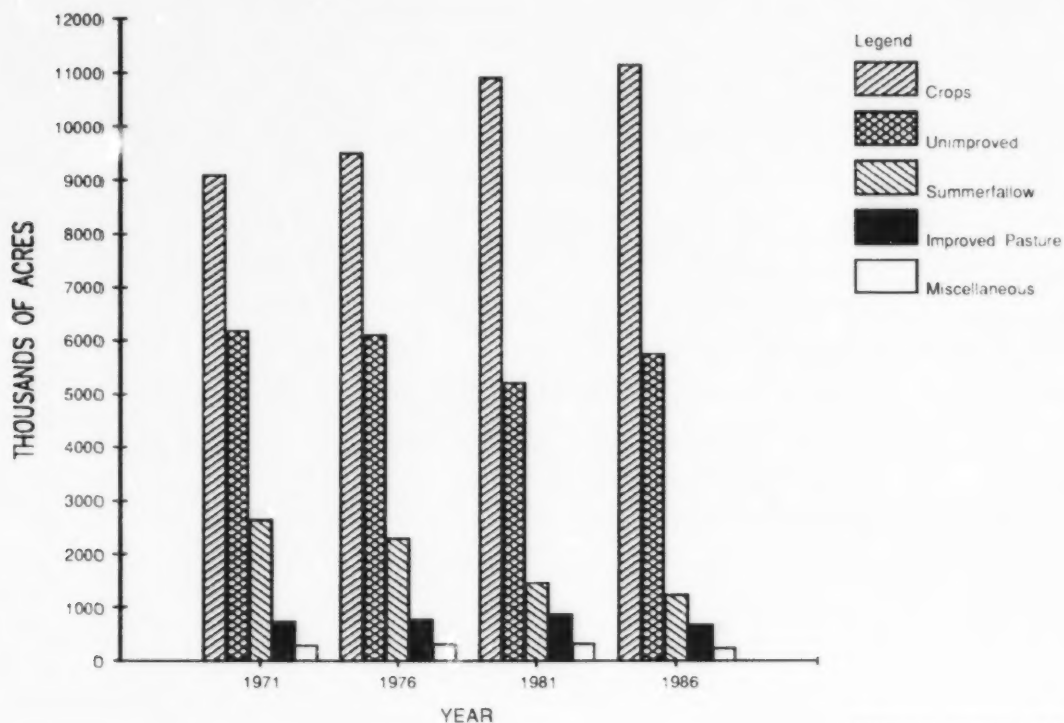
Manitoba extends 1,225 kilometres (761 miles) from the U.S. border to the Northwest Territories. Its area is 67.6 million hectares (167 million acres). The total land area is 54.8 million hectares (135.5 million acres), of which 14.6 million hectares (36.2 million acres) or 26.7 percent have some agricultural potential. Over 9.6 million hectares (23.6 million acres) of this area are nonorganic soils; 5.5 million hectares (13.5 million acres) of these are suitable for sustained annual production of cultivated crops. Land use for agriculture in 1986 (both improved and unimproved land) totalled 7.7 million hectares (19.1 million acres), or over 50 percent of total lands with agricultural potential. In 1989, 4.8 million hectares (11.8 million acres) were seeded to crops, 0.4 million hectares (1.0

million acres) were summerfallowed and 0.3 million hectares (0.7 million acres) were improved pasture lands.

Further opportunity to expand the agricultural land resource base through greater use of organic soil areas also exists. Approximately 5.1 million hectares (12.6 million acres) of organic soils are in the non-permafrost or fringe agricultural zone of Manitoba. Potentially 0.6 million hectares (1.5 million acres) of these soils could be used for grain or special crop production. Another 0.2 million hectares (0.5 million acres) of organic soils could be easily developed and brought into forage crop production. About 0.2 million hectares (0.5 million acres) of organic soils are currently under cultivation.

GRAPH 1

LAND USE 1971 - 1986



Datasource: Statistics Canada

FARMS AND FARMERS

In 1986 Manitoba had 27,336 farms with sales of \$250 or more. The average farm size was 283 hectares (700 acres). The number of farms declined by 7.2 percent between 1981 and 1986, reflecting the continued trend towards farm consolidation. In 1986, 63 percent of Manitoba farmland was operator-owned, while 37 percent was rented land. The area of rented land had increased by 350 000 hectares (866,000 acres) or 14 percent since 1981.

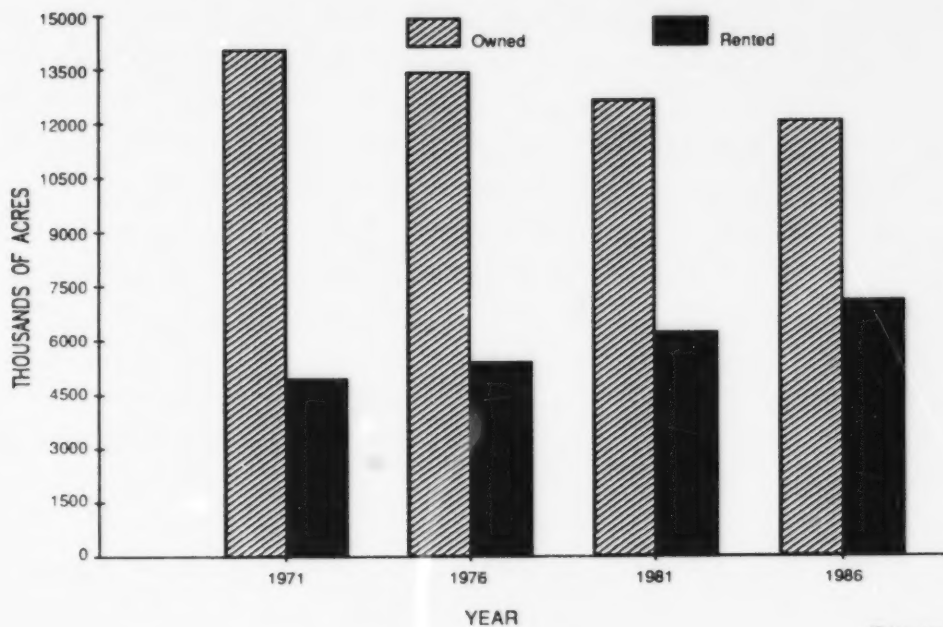
The 1986 Census of Agriculture showed that 22 percent of farm operators were less than 35 years old, a decrease of three percentage points from the 1981 level. Eleven percent were 35 to 39, 33 percent were 40 to 54, and over 33 percent were 55 years and over. In 1981, 30 percent of farmers were over 55 years. Although the total number of farm operators declined between 1981 and 1986, the number of producers with sales of \$10,000 or more was the same in both years. The total farm population in 1986 was down 14 percent from the 1981 level. Approximately one Manitoban in 13 lived on a farm in 1986 compared with one in ten in 1981.

The 1986 Census showed that Manitoba farmers hired a total of 342,706 weeks of full-time and part-time labour. This represents a 38.3 percent increase in the number of weeks of hired labour since 1981, and a 28.7 percent increase in the number of farms reporting hired labour. Over 51 percent of hired help was employed on a part-time basis. In general, a shift away from year-round hired labour to more seasonal task-specific term employment was evident.

In 1986, farm operators worked 1,536,485 days off the farm, a decrease of 4.3 percent from 1981. During this same period, although the number of farms where the operator reported off-farm employment decreased by 5.7 percent to total 9,714 in 1986, the proportion of all farms with the operator reporting off-farm work increased from 35.0 percent in 1981 to approximately 35.5 percent in 1986. Off-farm employment by Manitoba farmers is common and could continue to expand as labour requirements of the farm decline and as economic conditions pressure producers to find supplementary sources of income. Beginning farmers may also use this as an alternate way of entering full-time farming.

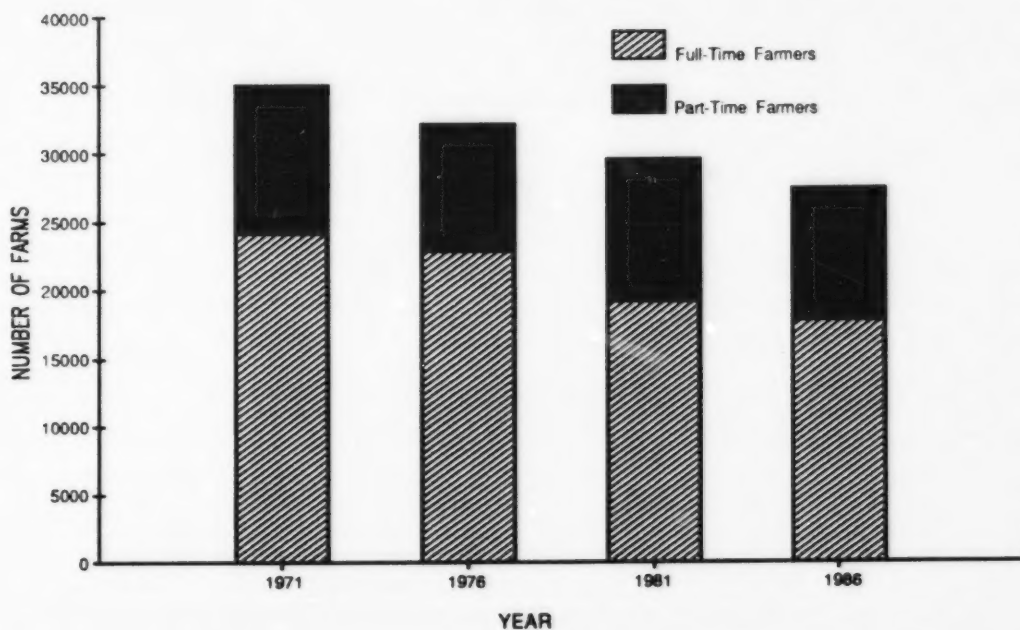
GRAPH 2

TENURE STATUS OF FARMLAND 1971 - 1986



Datasource: Statistics Canada

GRAPH 3 FARMS CLASSIFIED BY WORK STATUS OF OPERATOR
1971 - 1986



Datasource: Statistics Canada

FARM INCOMES

Farmers have very little control over the prices they receive for most of the commodities they produce. Increasing production costs, dependence on the weather and variable commodity prices make farming a risky business. Realized net farm income (cash flow) in Manitoba increased from \$278 million in 1985 to \$415 million in 1986 and \$453 million in 1987, but decreased to \$372 million in 1988 and \$295 in 1989. Preliminary projections indicate that with reduced government assistance to grain producers, farmers will net only \$241 million in 1990, a decrease of 18 percent from a year earlier.

Total net income (net cash income adjusted for inventory change) per farm was \$13,900 in 1981. This fell to \$1,805 per farm in 1983 and peaked at \$19,562 per farm in 1985 due to bumper crops and an inventory build-up. In 1986, total net income averaged \$13,839 per farm, due in part to reduced on-farm inventories. Lower grain and oilseed receipts were offset by lower production costs and increased government payments to keep total net income at \$13,814 per farm in 1987. Reduced on farm inventories and higher operating expenses and depreciation resulted in a drop in net farm income to \$5,600 per farm in 1988. The situation improved in 1989 when increased cash receipts and on-farm inventories more than offset higher operating expenses to raise total net farm income to \$16,000 per farm.

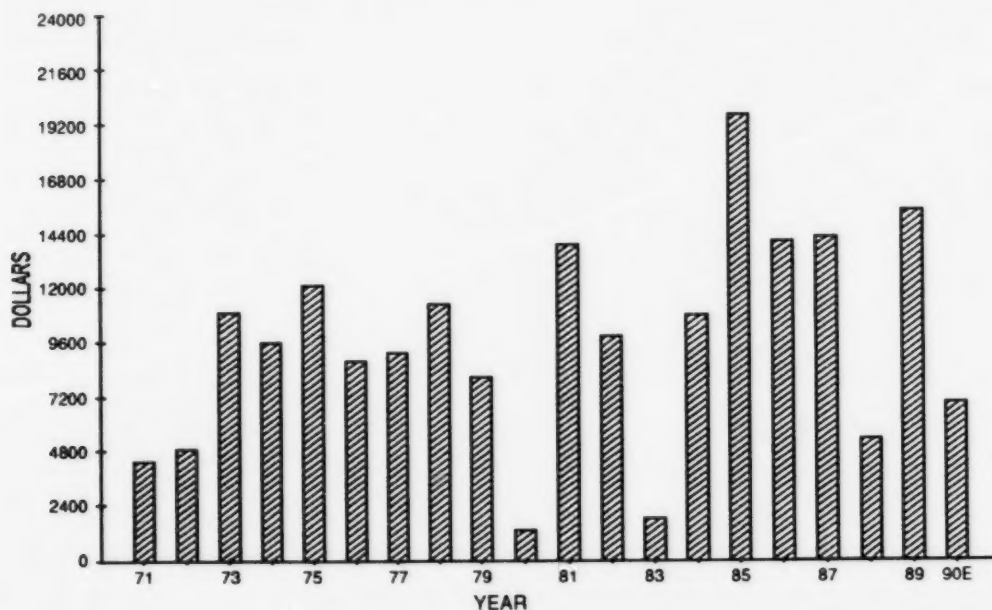
FARM FINANCIAL DIFFICULTIES

High real interest rates, low commodity prices, adverse weather conditions, a declining equity land base in recent years and management problems have all contributed to the current financial difficulties experienced by many Manitoba farmers. In 1989, an estimated 24 percent of Manitoba farmers were in a financial situation which made continued operation uncertain. About six percent of all farms were considered nonviable, six percent were classified as deteriorating financially, and 12 percent were financially vulnerable.

FARM EFFICIENCY

Improved productivity in all sectors of the food system has greatly increased food production and lowered food prices over the past fifty years. Much of this increased efficiency is due to farmers. Each Manitoba farm now feeds 250 people, five times as many as fifty years ago. In addition, food prices have not increased as much as wages in Manitoba, so a consumer only has to work half as long now as he or she did fifty years ago to buy Manitoba produced meat, milk, eggs, bread and vegetables.

GRAPH 4 TOTAL NET INCOME PER FARM 1971 - 1990



Datasource: Statistics Canada

CAPITAL INVESTMENT

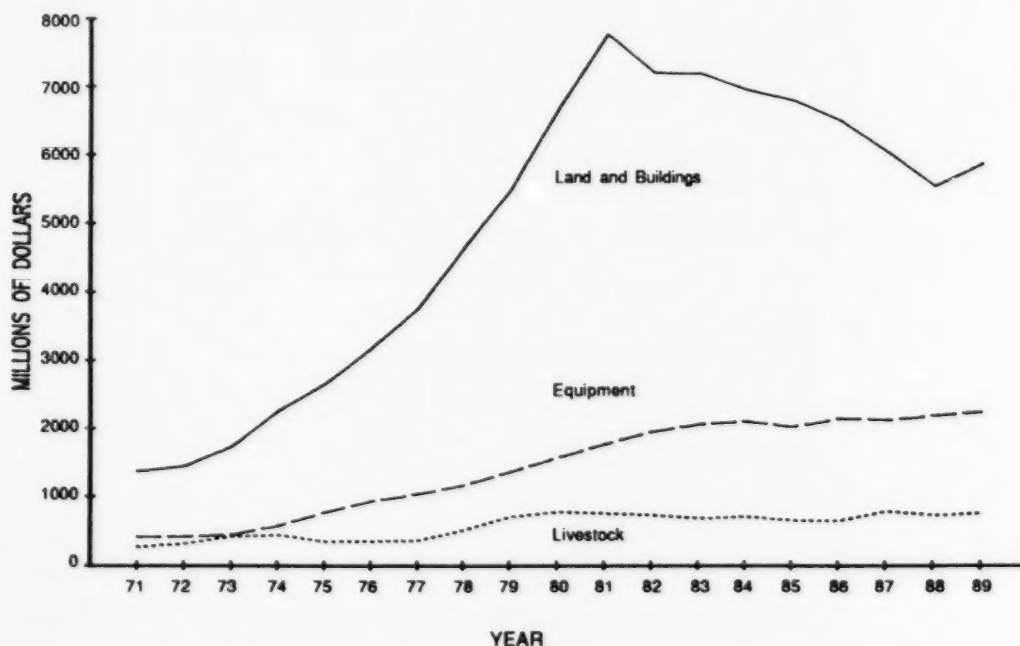
The total value of fixed capital used by Manitoba farmers in 1989 was almost \$9.2 billion, or \$337,400 per farm operation. This included \$6.0 billion (65.0 percent) for land and buildings, \$2.3 billion (25.6 percent) for machinery and equipment and \$0.9 billion (9.4 percent) for livestock and poultry. Between 1981, when land values peaked, and 1988, the fixed capital investment in Manitoba agriculture decreased by over 17 percent. However, in 1989, capital investment rose by over five percent.

A noticeable shift has occurred in the distribution of capital investment. Land and buildings now account for 65 percent of total investment. This compares with 75 percent in 1981, and about 70 percent in 1976 for the same components. The change in the contribution of land to total investment can be attributed to the escalation of land prices in the late 1970s because of increased investment in land, followed by a decrease in land values in the mid-1980s. In 1989, the average value of farm land and buildings in Manitoba was approximately \$771 per hectare (\$321 per acre), six

percent above the 1988 level of \$726 per hectare (\$294 per acre). Between 1971 and 1981, capital investment in Manitoba agriculture more than doubled every five years. However, between 1981 and 1988, high real interest rates and low commodity prices reduced capital investment in farming. Farm machinery sales in the province have also suffered.

In 1988, the ratio of Manitoba farm equity to assets was estimated at 0.80. By enterprise type, cash crop, dairy, hog and beef operations had equity to asset ratios of 0.80, 0.75, 0.75 and 0.83 respectively. Manitoba farmers had total assets estimated at \$9.04 billion, liabilities of \$1.81 billion and a net worth of \$7.23 billion. Assuming farm sales are used as a proxy for farm size, then total liabilities as a percentage of total assets increased as farm size (total value of farm sales) increased. This percentage rose from a low of 12.2 percent for small farms (less than \$26,840 farm sales) to a high of 23.0 percent for larger farms (farm sales over \$85,750).

GRAPH 5 CAPITAL INVESTMENT IN AGRICULTURE 1971 - 1989



Data source: Statistics Canada

Chartered banks financed almost 38 percent of the total farm debt in Manitoba in 1989. The provincial and federal governments, through agencies such as MACC (Manitoba Agricultural Credit Corporation) and the FCC (Farm Credit Corporation), financed 12.7 and 18.3 percent of the provincial farm debt respectively. Credit unions financed 16.9 percent of farm debt, while personal sources of credit, along with trust and insurance companies, accounted for 13.4 and 0.7 percent respectively.

Established farmers who own their land and have low debt-to-asset ratios will likely survive the current economic situation. However, younger and beginning farmers, including those with low equity, face a more difficult financial situation. New farm operators often have limited finances to become established, and their low equity makes them a high risk to lending institutions. In many cases, MACC is the only source of financing for these higher-risk farmers. There were 439 farmers who had long-term loans totalling \$24.5 million (other than for refinancing) approved by

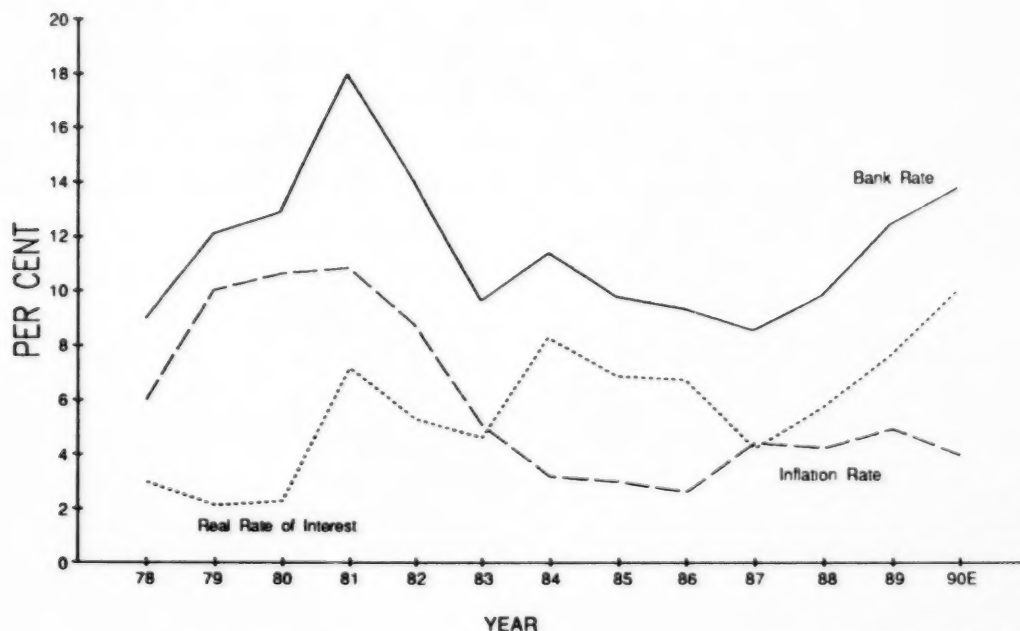
MACC for the fiscal year 1988-89. Of these, 95 percent were younger than 40 years.

Because of reduced farm incomes and the high cost of borrowing, farmers with low equity continue to face a serious challenge in continuing their farming operations. Due to increased financial pressure, some farmers are shifting their debt structure from short and intermediate-term to long-term to ease their repayment burdens. As farms become larger, operating debt financing becomes more important in their cost of operation.

The interest paid on farm debt in 1989 was estimated at \$173.7 million. This was up by four percent from 1988. Interest on debt as a percentage of total farm operating expenditure decreased from 17.6 percent in 1981 to 11.4 percent in 1986 and 11.3 percent in 1989. As interest still forms a significant percentage of total farm operating expenditures, it appears that a high equity position could be as important as operating efficiency to assure continued solvency.

GRAPH 6

BANK RATE, INFLATION RATE, REAL RATE OF INTEREST 1978-1990



Datasource: Bank of Canada Review

OTHER AGRICULTURAL EXPENDITURES

Manitoba farmers have substantial operating expenditure requirements for such items as seed, feed, fertilizer and fuel. In 1984, total farm operating expenses (which included operating capital requirements and depreciation) were \$1.71 billion. The 1989 total farm operating expense requirement was \$1.82 billion, up seven percent from 1988 but only six percent higher than in 1984. It is estimated that 1990 total farm operating and depreciation expenses will remain at about \$1.82 billion.

Fertilizer: The total volume of fertilizer sold went from 701 200 tonnes in 1988 to 627 500 tonnes in 1989. Total fertilizer expenditures in 1989 were estimated at \$194.4 million, unchanged from 1988. Manitoba farmers used two percent less fertilizer between 1984 and 1989, with fertilizer expenditures declining by eight percent over the five-year period.

Herbicides: In 1987 and 1988 the level of herbicide use in Manitoba was estimated at 3.6 and 5.9 million kilograms (7.8 and 13.0 million pounds) of active material respectively. Use decreased to 5.0 million kilograms (11.0 million pounds) in 1989.

Pesticides: Total farm pesticide expenditures in 1989 were estimated at \$119.5 million, unchanged from 1988, but up by 15 percent from the 1984 level.

Fuel: The total farm expenditure for diesel, gasoline and lubricants in 1989 was \$138.4 million, down

16.7 percent from 1988. Farm fuel rose from 10.9 percent of total farm operating expenses in 1981 to peak at 13.1 percent in 1983, but declined to 9.0 percent in 1989.

Machinery: Capital invested in farm machinery and equipment in 1984 was \$2.7 billion. In 1989, this value was estimated at \$2.35 billion, an increase of almost three percent from the 1988 value.

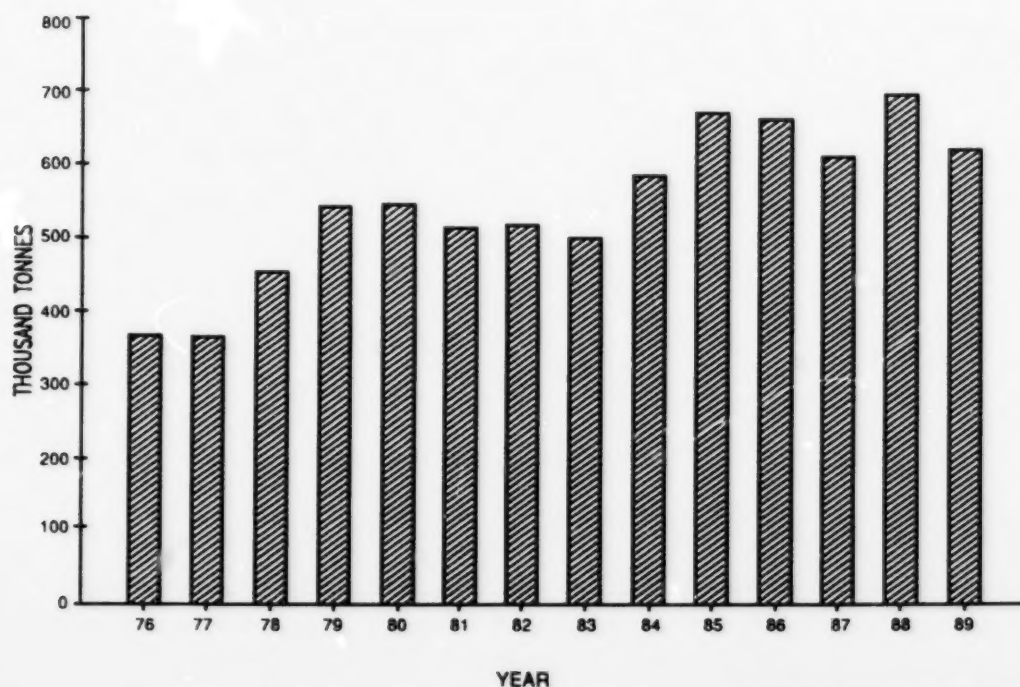
Repairs: In 1984, Manitoba farmers spent \$126.8 million on equipment repairs. In 1989, expenditures were estimated at \$142.3 million, a seven percent increase from 1988.

Buildings: Farm expenditure for building repairs in 1989 was \$32.5 million, five percent more than in 1988 and 54 percent above the 1984 level. Many farm buildings have been fully depreciated, but still remain serviceable.

Livestock: Total livestock expenditures by Manitoba farmers in 1989 were estimated at \$247.9 million. This is up by eight percent from 1988 expenditures due to higher feed costs and stabilization premiums in 1989. In comparison, the total expenditure in 1984 was over \$159.6 million. Livestock expenses in 1988 represented 16.0 percent of total operating expenditures compared with 16.1 percent in 1989.

GRAPH 7

FERTILIZER SALES, 1976 - 89



Datasource: Western Canada Fertilizer Association

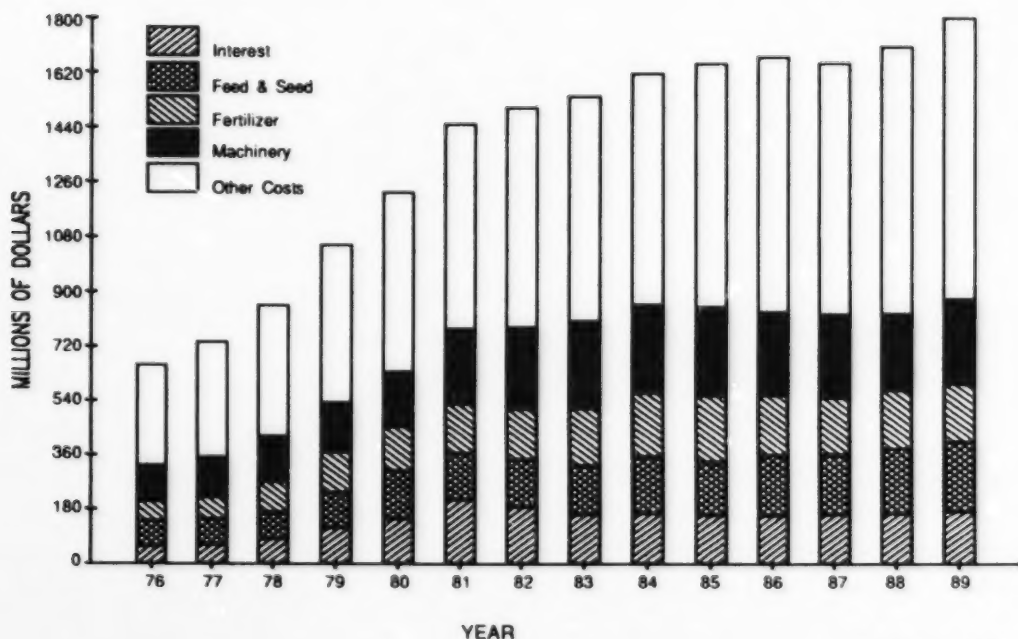
Seed: In 1989, Manitoba farmers spent \$54.8 million on seed compared with \$48.5 million in 1984 and \$48.4 million in 1988. Seed costs in 1989 and 1988 accounted for 3.6 and 3.4 percent of total expenditures respectively.

Other Expenditures: Other farm expenditures include taxes, wages, rentals, insurance, electricity, telephone, etc. Of the total \$1.54 billion of farm expenditures in 1989 (excluding depreciation), other expenditures amounted to \$436.1 million or 28.3 percent of the total. This increase of 11 per cent from 1988 was mainly due to a 67 percent increase in total crop and hail insurance premiums in 1989. In 1984, other expenditures accounted for \$326.2 million, or 23.9 percent of the total.

AGRICULTURAL PRODUCTION

Manitoba's farm cash receipts were estimated at \$2.1 billion in 1989, a two percent decrease from the previous year. Almost 42.5 percent of these receipts were derived from crop production, while 36.2 percent came from livestock production, including the production of honey, fur, forestry products and P.M.U. operations. The remaining 21.3 percent came from Crop Insurance, Western Grain Stabilization, the Special Canadian Grains Program, other stabilization payments and supplementary payments.

GRAPH 8 **FARM CASH AND OTHER EXPENSES**
1976 - 1989



Datasource: Statistics Canada

CROPS

Although southern Manitoba has the climate and soil to grow a wide range of crops, the traditional **grain crops** of **wheat** and **barley** occupied over 58 percent of the 4.8 million hectares of cropped area in the province in 1989. Together, these two crops contributed about 40 percent of total farm cash receipts in the early 1980s. However, low grain prices until mid-1988 caused this contribution to decline to one third in 1985 and 1986 and less than one quarter in 1987 and 1988. The 1988 North American summer drought resulted in higher world prices for grains, but farm cash receipts from wheat and barley remained low in 1988-89 because of significantly reduced yields throughout most of southern Manitoba. Wheat production rose to 4.0 million tonnes in 1989, up by almost 67 percent from 1988, while barley production increased by 42 percent to 1.6 million tonnes.

Manitoba produces other grain crops, such as **oats**, **rye** and **mixed grains**. These crops occupied 364 200 hectares in 1989.

Flaxseed has been a relatively important crop since the 1940s, but other **oilseed crops**, such as canola and sunflowers have gained prominence since the early

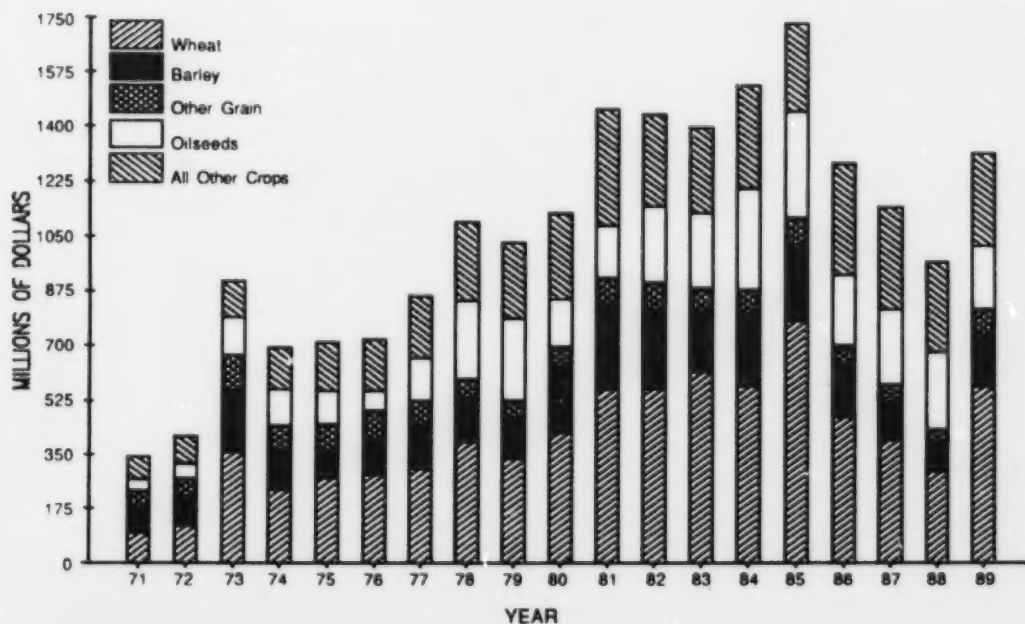
1970s. The province produced 44 percent of Canada's flaxseed, 91 percent of the national sunflowerseed crop and 13 percent of the canola crop in 1989. The area planted to **flaxseed** increased by seven percent to 303 500 hectares in 1989 while the flaxseed crop increased to 236 000 tonnes, up by 19 percent from the drought-affected crop of 1988.

Canola production peaked at 635 000 tonnes in 1985, but a record area, 627 000 hectares, was planted to canola in 1988. As a result of declining prices and the drought, the seeded area declined to 465 000 hectares in 1989, and production fell by 35 percent to 399 000 tonnes.

In 1979 Manitoba's **sunflower** acreage peaked at 153 800 hectares. However, in recent years, lower prices and problems due to weather, disease and insects has meant only 46 500 hectares were planted in 1989. 1989 sunflowerseed production was estimated at 63 000 tonnes, only 30 percent of the 1979 production.

The mix of crops and area seeded each year depends, to a large extent, on anticipated market prices relative to production costs. The area seeded to wheat

GRAPH 9 **FARM VALUE OF CROP PRODUCTION**
1971 - 1989



Datasource: Manitoba Agriculture

in the province in 1990 is expected to increase by five percent to 2 198 million hectares. Lower barley prices could encourage a three percent decrease in the area of barley to 647 000 hectares in 1990. Plantings of flaxseed are expected to increase to 344 000 hectares despite the anticipated decline in prices, but the canola acreage could decrease by 17 percent to 384 000 hectares.

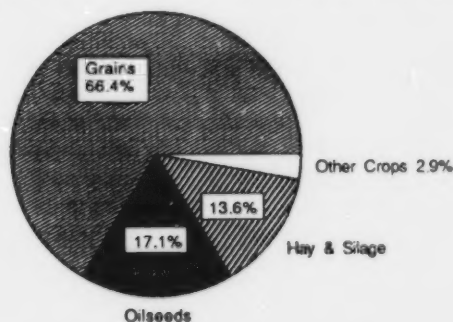
Manitoba is not only an important source of grains and oilseeds, but is a major area for the production of special crops in Canada. One of two major buckwheat-producing provinces, Manitoba supplied over 45 percent of the Canadian crop in 1989 with an estimated value of \$4.2 million. Manitoba's dry field pea production, valued at \$15.8 million, was estimated at 29 percent of the national crop in 1989, while 39 percent of Canada's sugar beets, 14 percent of the lentils and six percent of the mustard seed were produced in Manitoba. Overall, special crop plantings in

1990 (excluding corn) are expected to be one percent below the 1989 level, mainly due to the smaller field pea and fababean areas more than offsetting increased areas of mustardseed, lentils and field beans. Manitoba's grain corn area is expected to decrease by six per cent to 32 400 hectares in 1990.

Manitoba's vegetable industry, although still relatively small compared to the major producing provinces of Ontario and British Columbia, has grown in importance over the years, particularly in terms of employment and import substitution. Manitoba had 148 potato producers, 37 major vegetable producers and over 250 market gardeners who employed more than 2,000 full-time and seasonal farm workers in 1989. In 1989, potato and vegetable production was valued at \$52 million, down from \$60 million in 1988. In addition, the production of fruit, mushrooms, flowers, nursery products and sod in Manitoba amounted to almost \$31 million in 1989.

GRAPH 10

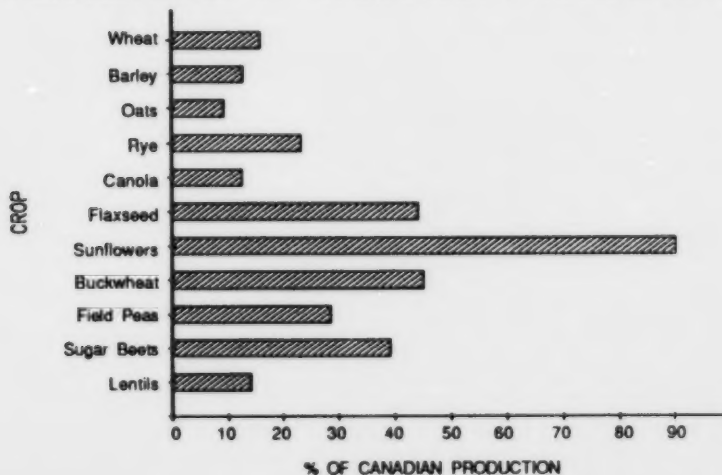
AREA OF CROPS PLANTED IN MANITOBA 1989



Datasource: Statistics Canada

GRAPH 11

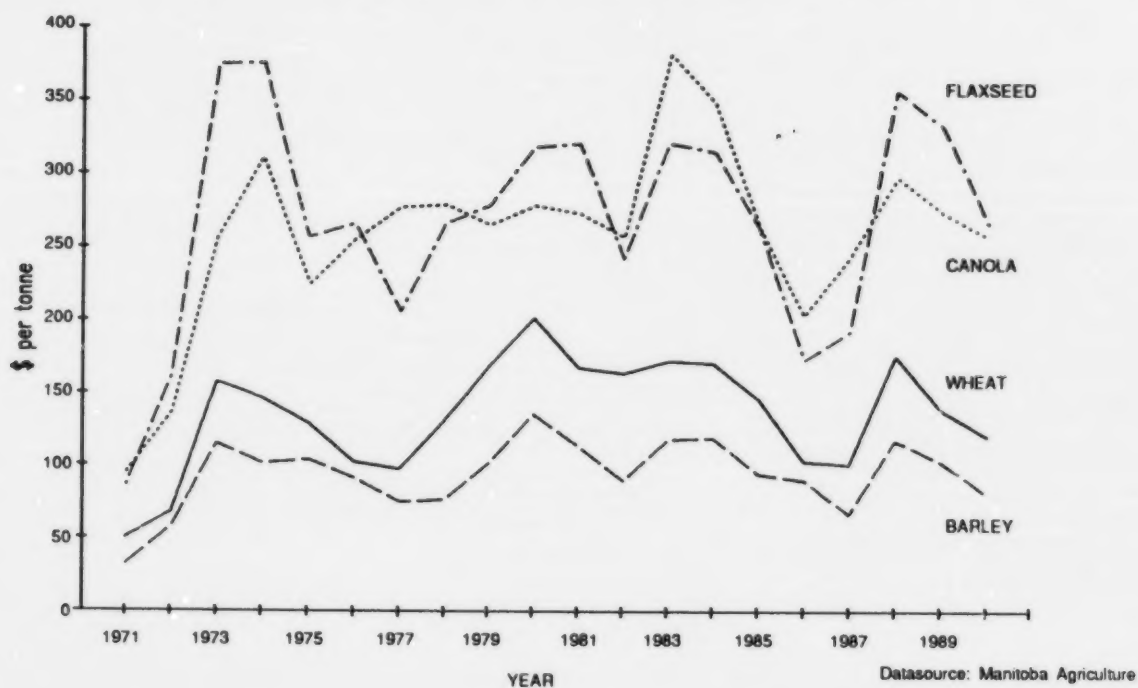
MANITOBA CROP PRODUCTION AS A PERCENTAGE OF CANADIAN PRODUCTION 1989



Datasource: Statistics Canada

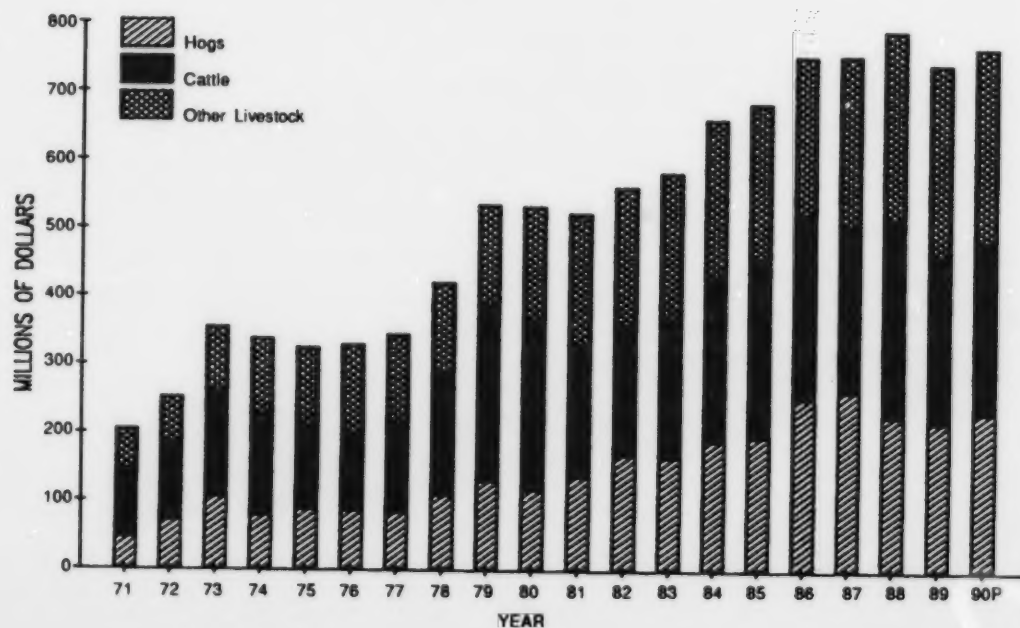
GRAPH 12

PRICES OF SELECTED CROPS, 1971 - 1990



GRAPH 13

FARM VALUE OF LIVESTOCK PRODUCTION, 1971-1990



LIVESTOCK

The livestock industry in Manitoba contributed 36.2 percent of the total farm cash receipts in 1989, down from 36.9 percent in 1988, and down from 37.6 percent, the average of the previous ten years. Marketings of cattle and calves amounted to almost 36 percent of livestock product value and provided 12.9 percent of total 1989 farm cash receipts. This made beef the second largest farm commodity next to wheat. The province has over eight percent of all cattle and calves in Canada, over 11 percent of the beef cows, almost five percent of the dairy cows, almost 12 percent of the hogs, three percent of the sheep and lambs, seven percent of the hens and chickens, nine percent of the turkeys, 95 percent of the geese, four percent of the ducks and 11 percent of the egg production. Only four percent of Canada's population lives in Manitoba, thus the province is a surplus supplier of most livestock products.

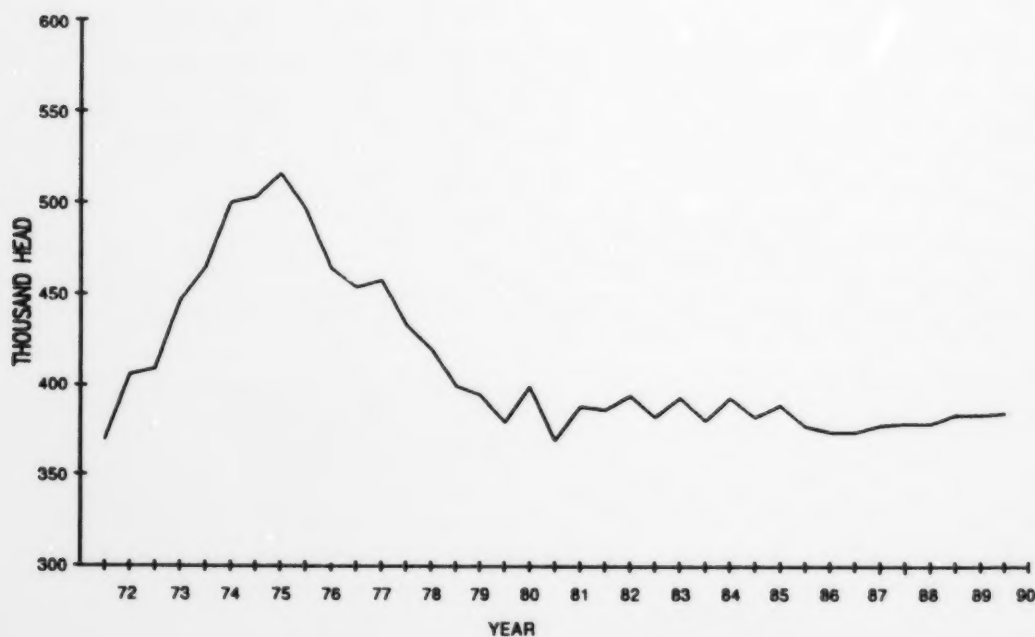
Prices for Manitoba's cattle and hogs are dependent on prices in the United States and, to a lesser extent, in eastern Canada. Thus local prices tend to be variable, depending on the supply and demand for red meats particularly in the major markets of the U.S., Ontario

and Quebec. This situation has in the past, made management decisions difficult for local producers, who tended to suffer from price and income instability. The national tripartite stabilization plans have been introduced to help limit the effect of price fluctuations.

Declining North American per capita beef consumption (since the peak year of 1976), and variable profitability from beef production resulted in a decline in the Manitoba cattle herd from 1977 to 1987. Encouraged by higher calf prices since 1987, the beef cow herd increased slightly in 1988 and by over one percent in 1989. The total number of cattle slaughtered in Manitoba packing plants peaked at 581,000 head in 1976. Ten years later, slaughterings had declined to 380,900 head. The closing of Canada Packers' slaughter facility in April, 1987 further reduced local slaughter capacity by about 40 percent. With increased sales of feeder cattle and calves to Alberta and Saskatchewan, Manitoba inspected slaughter fell by 37 percent to 241,600 head in 1987 and again by 24 percent to 183,300 head in 1988. By 1989, only 125,800 cattle were slaughtered in Manitoba.

GRAPH 14

NUMBER OF BEEF COWS IN MANITOBA JANUARY 1 AND JULY 1, 1972 - 90



Datasource: Statistics Canada

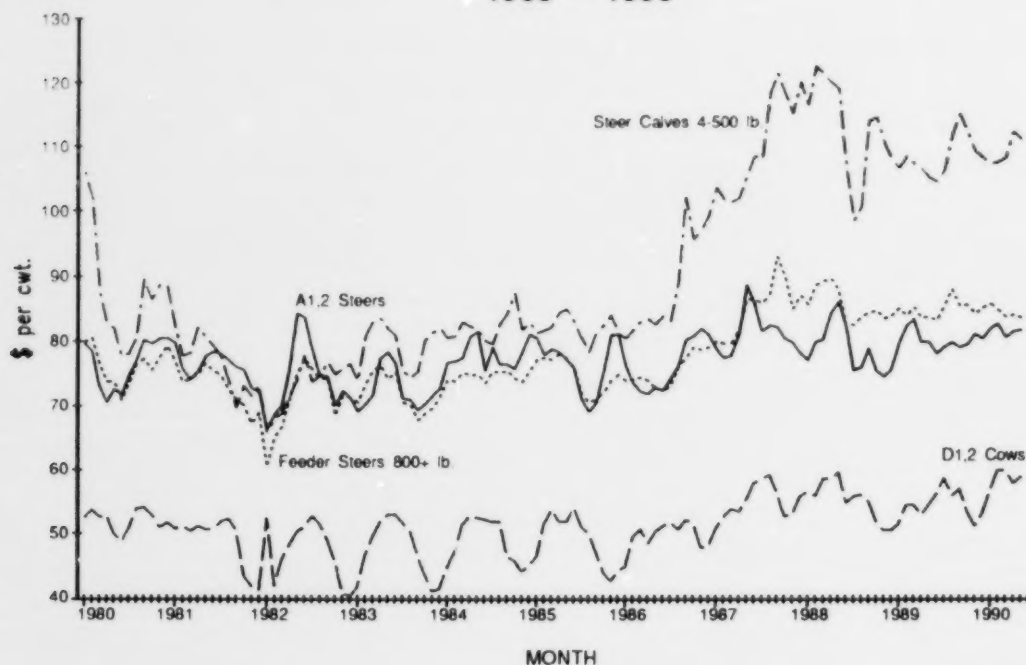
Manitoba **hog** marketings rose to 1,352,000 head in 1971, but decreased to 835,000 head in 1976. Price stabilization plans introduced since 1981 encouraged herd expansion and by 1989, Manitoba hog marketings had reached 2.2 million head with a value of \$219 million. Manitoba's share of the Canadian hog market declined from 13 percent in 1971 to less than nine

percent in 1982 as hog production shifted to the central Canadian provinces, particularly Quebec. However, by 1989, Manitoba's share of national slaughter had increased back to 13 percent.

The **sheep** industry is much smaller than that of cattle and hogs. The number of sheep on Manitoba farms peaked at 81,300 head in 1981, but had declined

GRAPH 15

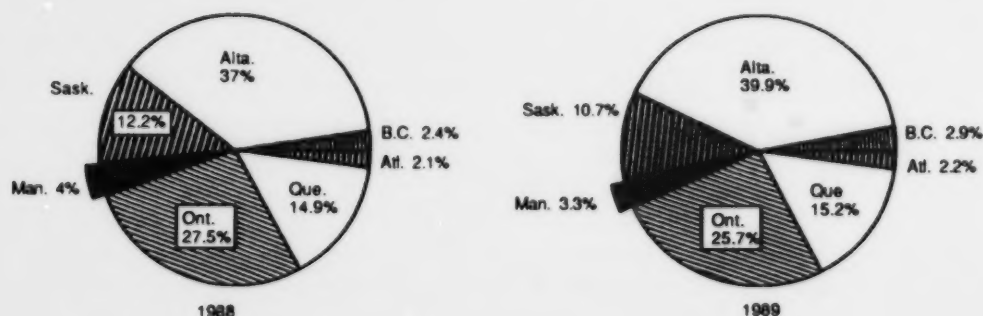
WINNIPEG CATTLE PRICES BY MONTH 1980 - 1990



Datasource: Agriculture Canada

GRAPH 16

CATTLE SLAUGHTER BY PROVINCE OF ORIGIN, 1988 AND 1989



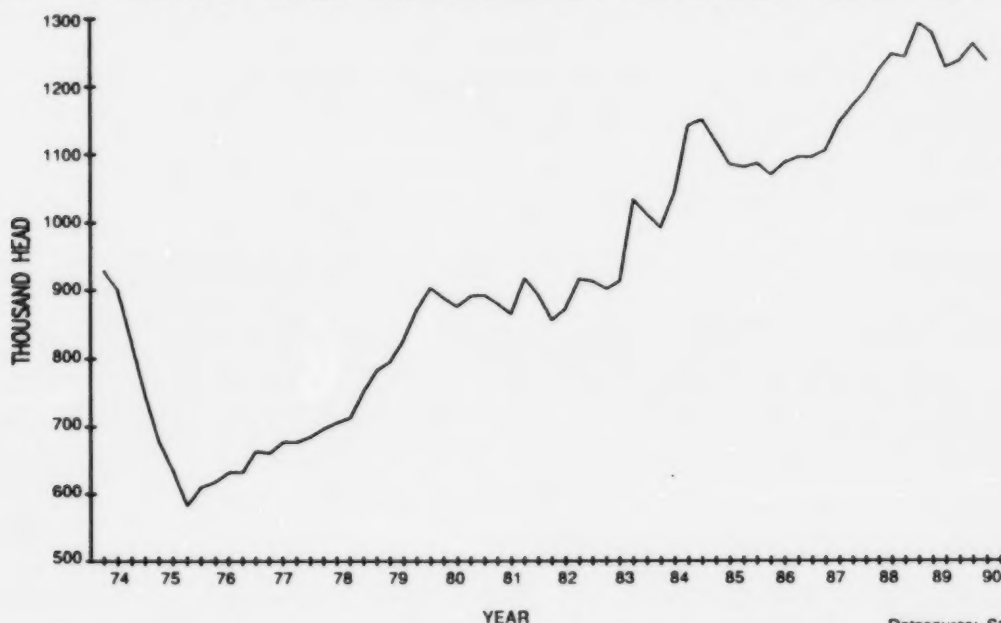
Datasource: Agriculture Canada

to 22,000 head by 1988. Increased interest in sheep production in 1989 raised the provincial flock by five percent to 23,000 head. Only about 20 percent of the sheep produced in Manitoba are slaughtered in provincial-inspected packing plants located in the province. A large number of producers sell their product privately to the consumer or through brokers to other provinces and the United States.

In 1989, Manitoba's 66,000 dairy cows produced milk and cream valued at \$131.8 million (including supplementary payments). This was an increase of 2.1 percent from the 1988 level.

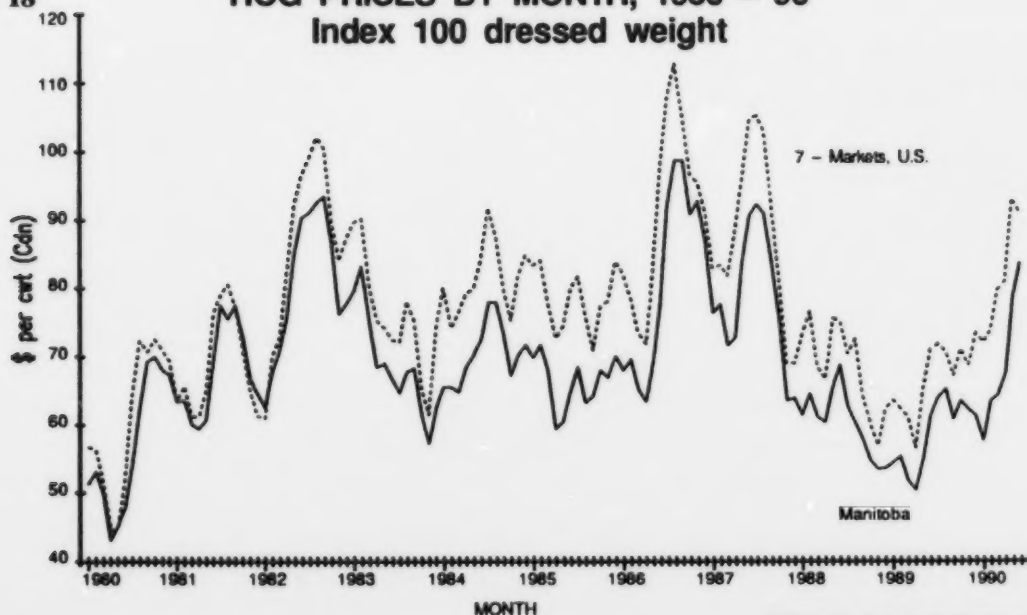
Farm receipts for chickens, turkeys and eggs produced in the province amounted to \$109.4 million in 1989, up by nine percent from the previous year.

GRAPH 17 MANITOBA HOGS ON FARMS BY QUARTER, 1974 - 90



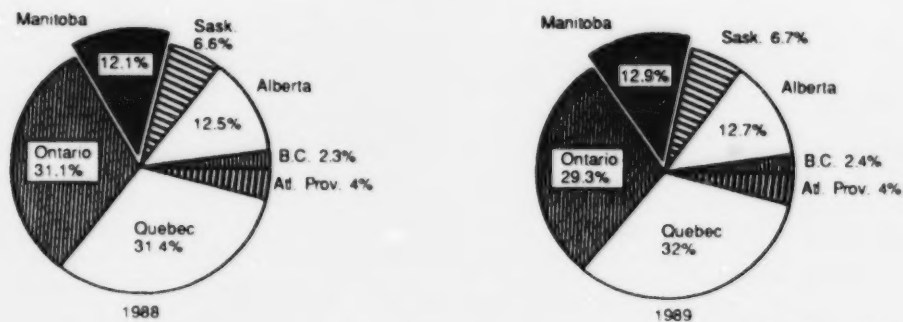
GRAPH 18

HOG PRICES BY MONTH, 1980 - 90
Index 100 dressed weight



GRAPH 19

HOG SLAUGHTER BY PROVINCE OF ORIGIN 1988 AND 1989



Datasource: Agriculture Canada

AGRICULTURAL TRADE

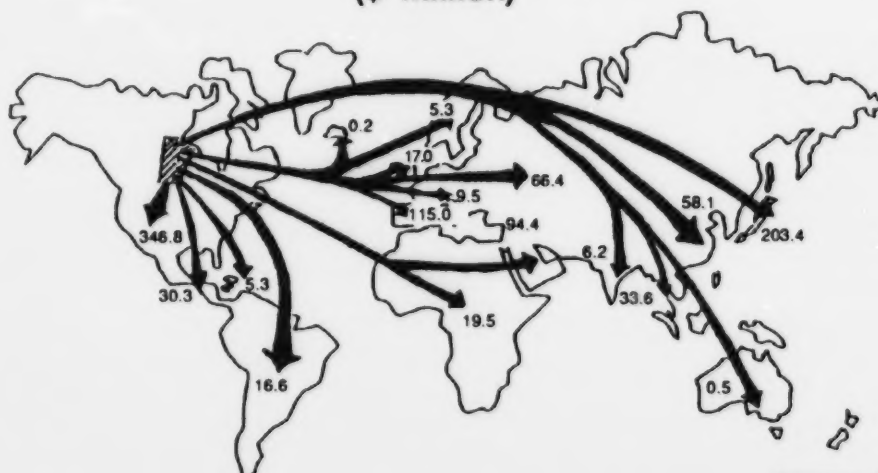
Manitoba's agricultural exports are shipped mainly in unprocessed or semi-processed states to other Canadian provinces and 99 countries. Manitoba uses about 12 percent of the wheat and almost 50 percent of the barley produced in the province, the remainder being exported to eastern Canadian markets or overseas. About 46 percent of Manitoba slaughter cattle and approximately 74 percent of the hogs marketed in 1989 were sent out of the province, either live or in a processed state. Over 53 percent of the turkey, almost all the chicken and about 48 percent of the eggs produced in Manitoba in 1989 were consumed locally. Less than one percent of Manitoba's eggs were exported to other countries as most out-of-province shipments went to other Canadian provinces. Almost 90 percent of Manitoba geese were shipped to other provinces, the United States and West Germany. In

1989, about \$220 million of Manitoba livestock and livestock products were sent out of the country, while over \$755 million of processed and unprocessed grains, oilseeds and special crops were exported. Grain exports are one of the largest single sources of foreign exchange earnings for Canada.

Canada imported \$111 million worth of cheese, \$726 million of fresh vegetables, \$281 million of processed vegetables, \$523 million of cereal and bakery products, and \$708 million of meat and meat products in 1989, much of which could have been produced in Canada and, possibly, Manitoba. However, in many instances, given the lower labour costs and better weather conditions in exporting countries, it may not be economically feasible to reduce imports of some foods, such as fresh vegetables in winter.

FIGURE 1

MANITOBA EXPORTS OF AGRICULTURAL PRODUCTS AND FOOD, 1989 (\$ million)



Datasource: Statistics Canada

IMPACT OF AGRICULTURE ON THE PROVINCIAL ECONOMY

While the relative importance of primary agriculture in the provincial economy has varied significantly

over the past ten years, the total economic impact of the agricultural industry has been positive.

CONTRIBUTION OF FOOD PROCESSING

The food and beverage processing industry includes the slaughtering and/or processing of meat and poultry, fruit and vegetables, cereal products, dairy products, vegetable oils, feed, seed, sugar and beverages. It is the most important manufacturing industry in Manitoba, producing \$2.29 billion of goods and services in 1987; or about 33 percent of the total manufacturing output in the province. In 1987, the food and beverage processing industry employed 9,810 administrative, production and related workers with wages of \$257.3 million. Over \$1.5 billion worth of inputs went into the industry in 1987 and generated an added value of \$685 million.

The largest sector, meat and poultry slaughtering and processing, employed almost 3,590 people with wages totalling \$89 million in 1987. Principal raw inputs, cattle and hogs, account for about 80 percent of the meat processing industry's total cost of materials and supplies of \$774 million. Ninety-eight percent of the hogs and 72 percent of the cattle slaughtered in the province in 1989 originated in Manitoba. Over 60 percent of the sector's output consists of fresh pork and beef, while other processed meats comprise over 20 percent.

Technological changes in the production of processed meats are mainly responsible for the continuing rationalization of the meat packing industry. A new

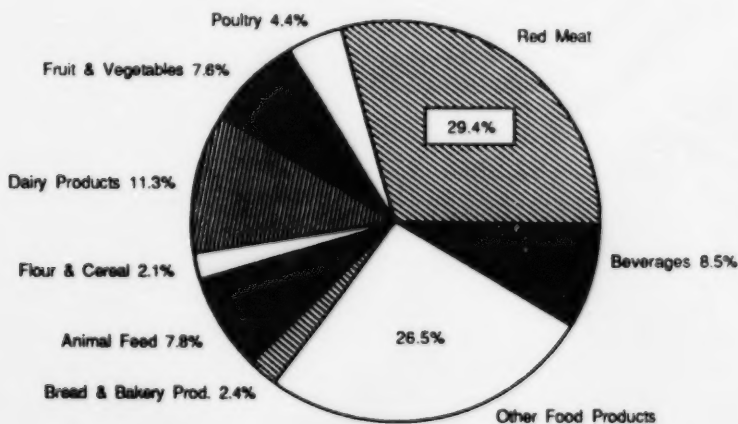
hog slaughtering plant, built in Neepawa, began operations in October, 1986. Canada Packer's closed its slaughter plant in early 1987, which reduced Manitoba's cattle slaughter capacity by about 40 percent. Further reduction in cattle and hog slaughter capacity came in March, 1990 when East-West Packers was forced to close. There has been some consolidation of turkey and chicken slaughterings as well as increased productivity in recent years. Manitoba continues to produce deboned turkey meat to supply part of the growing consumer demand for this product, particularly in Japan. Exports of turkey meat rose by 25 percent to 452 tonnes in 1989.

Other important Manitoba food processing sectors include dairy, bakery, animal feed, beverage and fruit and vegetable processing. The province's feed industry output was over \$179 million, employing 612 administrative and production staff in 1987. Principal inputs for the industry are barley, wheat, meat meal, corn and canola meal. Much of the corn and canola meal produced in Manitoba is used locally by the feed industry. Soybean meal is imported from the United States.

Manitoba has two oilseed crushing plants. One is located at Altona, and the other at Harrowby on the Saskatchewan border. Almost all the sunflowerseed and canola crushed at Altona comes from Manitoba.

GRAPH 20

MANITOBA FOOD AND BEVERAGE PROCESSING INDUSTRY, 1987



1987

Datasource: Statistics Canada

Output from the plants includes bulk crude and refined oil, bulk vegetable oil, retail pack refined oil, hulls and screenings. About 85 to 90 percent of the total production from the Altona plant is marketed outside the province, primarily in central Canada. The plants reduced output in 1988 and 1989 because of reduced canola supplies, competition from the European Economic Community and increased competition from soybean.

The Manitoba Sugar Company plant employs approximately 250 full and part-time staff. The plant processes only Manitoba sugar beets, with the entire provincial crop produced under contract to the plant. In 1989, provincial sugar beet production amounted to 295 000 tonnes, an increase of 30 percent from the drought-affected 1988 crop. The plant's primary product is granulated white sugar, marketed in either liquid or dry form as part of an extensive line of sugar products. In normal years, approximately 50 percent of the product is used directly by consumers, most of whom are in Manitoba. By-products include beet pulp and molasses used for livestock feed and industrial purposes, much of which is exported from the province.

The distillery at Gimli employs 84 people and uses about 38 100 tonnes (1.5 million bushels) of grain corn annually. Establishment of the plant at Gimli was based on the availability of high quality and abundant supplies of water and the use of Manitoba-grown grain corn. Between 1980 and 1984, Manitoba farmers supplied the bulk of the high quality corn required by the distillery. In 1985 and 1986 Manitoba grain corn production and quality was poor which resulted in virtually all the corn requirements for the distillery being met by U.S. suppliers. However, in 1988 and 1989 increased producer interest in growing corn resulted in a larger portion of the distillery corn requirements being met by Manitoba supplies.

CONTRIBUTION OF AGRICULTURAL INDUSTRIES

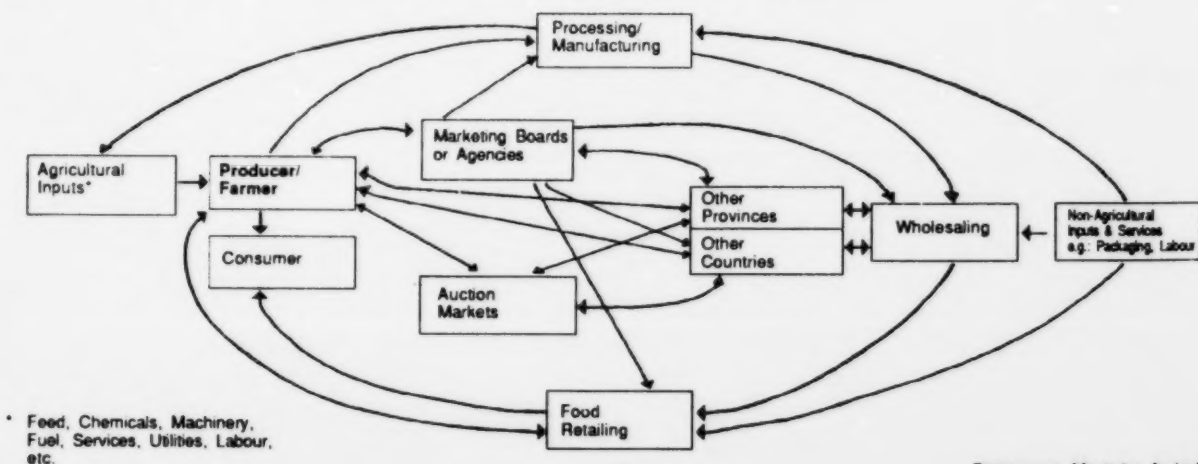
In 1987, there were 35 implement manufacturing companies directly associated with agriculture. The companies employed 1,817 workers, paid \$45.0 million in wages and salaries and produced \$194.4 million worth of equipment. In the manufacture of implements, the companies in turn purchased \$105 million in inputs and contributed \$83.8 million in value added to the final product. The total value of this contribution to the provincial economy is not solely attributable to Manitoba agriculture. However, it nonetheless indicates the significance of this sub-unit to the agricultural sector of Manitoba's economy.

In addition to the 35 companies directly linked to agricultural equipment manufacturing, numerous firms are more indirectly associated with the agriculture equipment industry. These firms produce inputs for agriculture as a secondary output of their operation or as an input into a larger agricultural manufacturing operation. The total value of this contribution to the agriculture sector in 1986 was estimated at \$140 million. The associated labour force was estimated at over 1,100.

In Manitoba, 395 licensed dealer establishments were selling farm machinery and associated equipment and providing service facilities in January, 1990. In addition, 45 licensed vendors supplied farm machinery and equipment repair parts to licensed dealers in the province. A number of unlicensed facilities provide repair services for farm equipment. Although statistics are not available on the total value of sales and servicing by this unit, it makes a further significant contribution to the agricultural sector of the economy.

FIGURE 2

MANITOBA AGRI-FOOD SYSTEM



CONTRIBUTION OF SERVICE SECTOR

Manitoba agriculture depends on various service industries. These industries include transportation, construction, finance, insurance and real estate. An estimated eight per cent of total provincial transportation expenditures involved the movement of agricultural products, raw or processed. About eight per cent of Manitoba's construction takes place on farms or is for agriculture-related industries. Farm expenditures on financial, insurance or real estate services amounted to approximately 12 percent of total expenditures for these services. In addition, both federal and provincial governments provide farmers with services such as extension, regulatory, research, development, financial and infrastructural. Manitoba farms used 8.1 percent of the total electric power and about half of the chemicals consumed in the province in 1989.

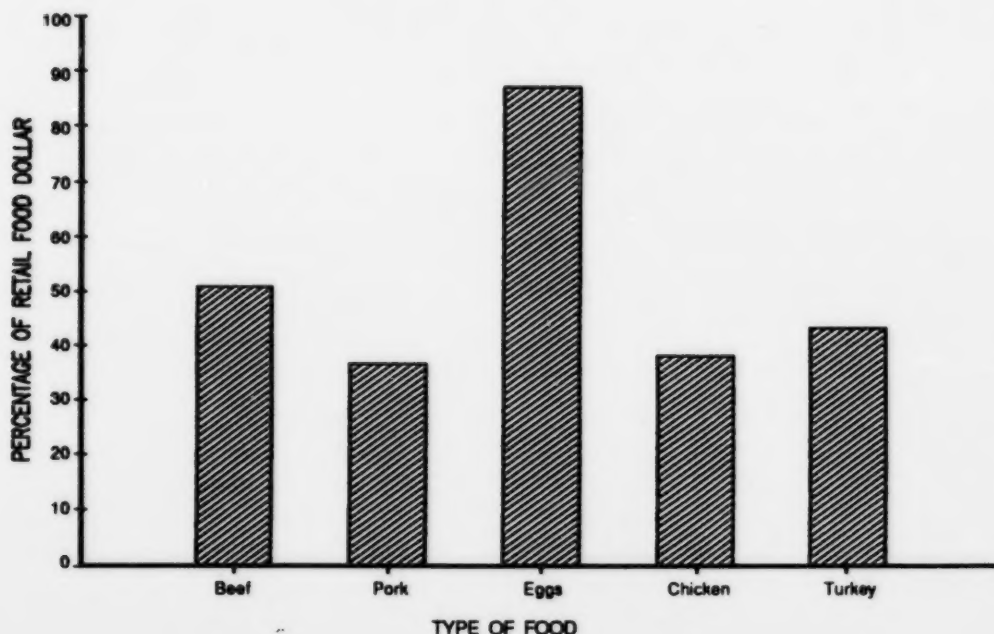
Although some of the food consumed by Manitobans is imported from other provinces or countries, over 55 percent of the food sold by Manitoba's grocery and other food stores is derived from products grown and processed in Manitoba. Thus, a portion of the retail margins from these stores can be included

with agriculture's contribution to the provincial economy. In 1989, Manitoba's 1,281 grocery and other food stores had over \$1.69 billion in total sales volume, an increase of 10 percent from the previous year. Gross margins and net profits amounted to about 23 percent (\$390 million) and 2.1 percent (\$35 million) respectively. It is estimated that 55 percent (\$215 million) of value added to foods purchased by retailers, is an indirect contribution of Manitoba agriculture to the economy. Food wholesaling activities also contribute to the economy.

For livestock products such as beef, pork, chicken, turkey and eggs, approximately 30 to 90 percent of the consumers' food dollar goes to the livestock producer, depending on the extent of the processing and merchandising required for each commodity. An egg producer received almost 88 percent of the retail price of eggs in 1989, while a hog producer received about 37 percent of the amount a consumer pays for pork. Processing and merchandising costs and wastage are greater for hogs than for eggs.

GRAPH 21

MANITOBA FARMERS' SHARE OF RETAIL PRICE OF FOOD, 1989



TOTAL IMPACT OF AGRICULTURE

One measure of provincial output is the Gross Domestic Product at factor cost, basically an aggregate of net profits and incomes, including wages, depreciation and investment income. Agriculture's direct contribution to the GDP increased to 10.4 percent in 1973, but declined to 7.8 percent in 1976, 7.1 percent in 1981, 6.7 percent in 1982 and 4.6 percent in 1983. Net farm income improved and primary agriculture's contribution to the GDP rose to 6.4 percent in 1984 and to 7.1 percent in 1985, but declined to 5.3 percent in 1986. Increased government assistance, particularly to grain producers, resulted in a contribution to the GDP of 5.1 percent in 1987, 4.9 percent in 1988 and 4.7 percent in 1989. Without government assistance, the contribution in 1987 and 1988 would have been 2.5 percent, while in 1989 the contribution was 2.6 percent.

Agriculture also makes an indirect contribution to the provincial economy through income derived from agriculture-connected industries. These include the food processing industry, industries which supply inputs to agriculture, as well as wholesale, retail and other service sector components which supply services to farmers and agriculture-related workers. When agriculture's indirect contribution to the G.D.P. was added to its direct contribution, an estimated 10.5

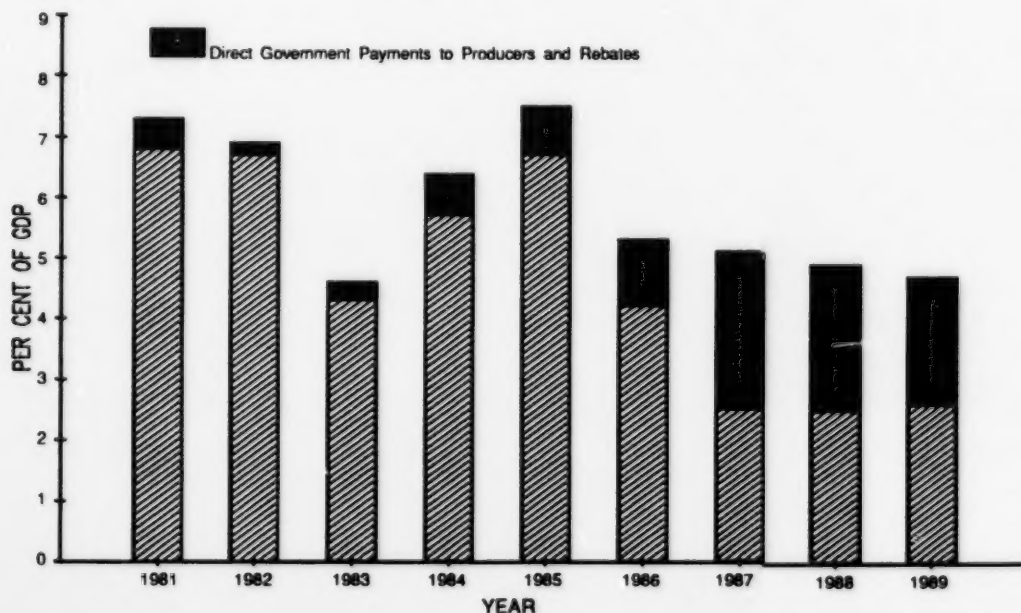
percent of Manitoba's GDP was attributed to agriculture in 1989 compared to 10.9 percent in 1988 and 12.3 percent in 1987. For every dollar of net income produced by primary agriculture in Manitoba, \$1.62 is generated in the overall Manitoba economy. Agriculture, directly or indirectly, accounted for about one dollar in nine of production in Manitoba's economy in 1989.

Another method of assessing agriculture's impact on Manitoba's economy is to compare the added value for agricultural inputs to that for the goods producing sector as a whole. In 1989, 16.8 percent of total added value was provided by agriculture compared with 17.3 percent a year earlier.

In 1989, 39,000 persons were directly employed in Manitoba agriculture. In addition, about 30,000 persons were employed in other areas of the provincial economy as a direct result of the agricultural industry, bringing total employment generated by agriculture to 13.9 percent of Manitoba's labour force in 1989. This means that about one job in seven was the result of agriculture production. For every job lost on farms in 1989, almost one job was lost in other areas of the Manitoba economy. In addition to stimulating employment locally, agriculture in Manitoba is directly responsible for about 26,000 jobs in other parts of Canada.

GRAPH 22

CONTRIBUTION OF PRIMARY AGRICULTURE TO MANITOBA GDP 1981 - 89



Data source: Manitoba Bureau of Statistics